

WHAT IS CLAIMED IS:

1. A fixing structure for fixing a color wheel to a base of a projector, said color wheel comprising a color rotating disc having a plurality of color filters selectively transmitting light of a predetermined wavelength among white light emitted from a lamp and rotatably installed such that the respective color filters are sequentially arranged on an optical path; and a driving source which drives the color rotating disc to rotate, said fixing structure comprising:

a first cover member coupled to the base;

a second cover member coupled to the first cover member and together therewith encompassing the color wheel;

a bracket to which the color wheel is coupled;

a coupling unit to couple the bracket to the second cover member; and

a buffer member provided between the first and second cover members and between the bracket and the second cover member and which reduces vibration generated from the color wheel and transferred to the second cover member via the bracket, and vibration transferred from the second cover member to the first cover member.

2. The fixing structure as claimed in claim 1, wherein the coupling unit comprises:

a plurality of coupling holes formed in the second cover member;

a plurality of through-holes formed in the buffer member at positions corresponding to the coupling holes;

a plurality of coupling grooves formed in the bracket;

a plurality of bushings inserted in the through-holes such that part of an outer side of each of the bushings contacts each of the coupling grooves;

a plurality of screws coupled to the coupling holes by passing through the bushings and the through-holes to couple the bracket to the second cover; and

a plurality of buffer washers inserted around the screws and arranged at the rear of the bracket to dampen vibration of the color wheel transferred through the bracket.

3. The fixing structure as claimed in claim 1, further comprising a glass rod holder for holding one side of a glass rod which makes light of a predetermined color transmitting the color wheel uniform at a predetermined position of the bracket.

4. The fixing structure as claimed in claim 2, further comprising a glass rod holder for holding one side of a glass rod which makes light of a predetermined color transmitting the color wheel uniform at a predetermined position of the bracket.